adapted as a function of a situation. For this purpose, a representation may be designed in a manner that is optimized for a visual perception of the represented information. If a control intention of a user is ascertained, however, then the represented information is changed such that an activation of a control element is possible in an optimal manner in accordance with the ascertained control intention for the control element.

[0013] According to example embodiments of the present invention, a method for operating an interactive control device, in particular in a motor vehicle, having a display device and information represented and/or representable on the display device, which information includes control elements, is provided, including the following:

[0014] ascertaining a control intention for at least one of the control elements represented on the display device,

[0015] adapting the information represented on the display device as a function of the ascertained control intention such that the at least one control element intended for a control operation is represented in a manner optimized for activating the control element.

[0016] According to example embodiments of the present invention, for ascertaining the control intention for at least one of the control elements represented on the display device, it is ascertained whether a body part of the operator is situated within an activation region that is spatially defined with respect to a display region of at least one of the control elements on the display device.

[0017] The method may provide for ascertaining the control intention for the at least one control element prior to an activation of the control action.

[0018] A method for operating an interactive control device, in particular in a motor vehicle, having a display device, may include the following :

[0019] displaying graphical information on the display device;

[0020] receiving sensor information;

[0021] activating a control action if it is ascertained on the basis of the sensor information that a body part of a user is situated within an activation region, which is spatially defined relative to the display region of a control element on the display device to which the control action is assigned,

it being provided that

[0022] the received sensor information includes user information, which for communicating a control intention for the at least one control element is evaluated prior to an activation of the control action; and

[0023] the information represented on the display device is adapted as a function of the ascertained control intention such that the at least one control element is represented in a manner optimized for activating the control action associated with the control element using the body part.

[0024] When changing from a visual layout, which is optimized for perceiving information, to a haptic layout, which is optimized for a control operation, the control element is superimposed or magnified for example. A small control element, for example, is magnified when a control intention is detected. This achieves the effect that a high density of information may indeed be represented on the display device, but that if a control operation is to be performed, this may be done comfortably at any time. User information is that sensor information that indicates a behavior of the user or that describes the user himself. The user information is ascertained with the aid of sensor units and is part of the sensor information that is evaluated in order to ascertain the control intention.

[0025] In order to be able to ascertain a control intention reliably, the sensor information may include information about a bodily action of the user. A bodily action, for example, is a movement of the user's arms or hands or fingers. Another bodily action, for example, is directing one's eyes in order to apprehend the information displayed on the display device.

[0026] The user information may include information regarding a viewing direction of the user. For an operation of a control element is often preceded by the user looking at the display device.

[0027] The viewing direction of a user may be detected by camera sensors for example. The user information may be detected at least partly by a camera system. Using such a camera system normally also makes it possible to detect reliably the movement of body parts.

[0028] Other exemplary embodiments of the present invention provide for the user information to be detected at least partly by an ultrasonic sensor system. An ultrasonic sensor system is suited to determine the position of body parts in a particularly exact and reliable manner. Using an ultrasonic sensor system it is thus possible to detect reliably a movement toward the interactive control device already at a relatively great distance from the control device. Likewise it is possible to perform precise position, extension and speed measurements in a close range from the control device. An ultrasonic sensor system may be used as an alternative to or together with other sensor systems.

[0029] A direction of movement of the body part may be ascertained on the basis of the user information. This direction of movement may be used individually or together with other information for example, in particular user information, preferably of a viewing direction, in order to determine a control element or several control elements from a group of control elements, which the user wishes to operate next. Example embodiments of the present invention therefore provide for ascertaining a control probability for the control element and possibly additional control probabilities for additional control elements when ascertaining the control intention and for adapting the represented information such that the at least one control element or the additional control elements, in accordance with their control probability, are represented in a manner optimized for an activation of the respectively associated control action or additional control actions. This makes it possible to implement a kind of "control spotlight". As a function of a distance of the body part, its direction of movement and/or a speed of the movement as well as additional user information, a region on the display device may be ascertained in which the control element to be operated is probably situated. This ascertained region is referred to as the control spotlight. At a great distance and slow speed of movement of the control hand, the control spotlight is still quite fuzzy, but becomes sharper with increasing proximity to the display device. Fuzzy means that there exists an uncertainty regarding a target position toward which the body part is moved on the display device. This target position is used as a center point of the control spotlight. The uncertainty is expressed in a surface of the control spotlight on the display device. The control spotlight is normally designed to be circular such that the fuzziness or uncertainty regarding the target position toward which the body part is moved on the display device is expressed in a radius of